Illinois Power Company Comments on ICC Draft Administrative Code Interconnection of Distributed Generation to Electric Utility Distribution Systems

General Comment #1 – ICC vs. FERC Jurisdiction

The issue as to whether the ICC or FERC has jurisdiction over an interconnection does not appear to be well-defined in the draft Code. In addition to the FERC Seven Factor Test, to determine if FERC jurisdiction applies, groups such as MAIN and MISO have a specific criteria regarding when generation on a distribution system has impact on the transmission system. They indicate that when the predicted loss of a generator has at least a 3% (MAIN) or 5% (MISO) lost generation capacity effect on a neighboring transmission line flow when the generator trips, then the interconnection is under FERC jurisdiction. It is recommended that the MAIN (or MISO) criteria be specifically prescribed in this document and furthermore applied per this Code so that jurisdiction can be clearly established upfront.

General Comment #2 – Confidentiality, "First-to-Market," and Cost Estimates with Binding Maximum Value Issues.

While the utility has no problem with the concept and importance of confidentiality of customer information, it should be noted that such confidentiality does create the potential for a customer impacting another customer. For example, if Customer A submits a complete application for a generator interconnection on a circuit on January 2 and Customer B submits a complete application for a generator interconnection on the same circuit on January 3, the interconnection analysis for Customer A will be done first (based upon the complete application's time stamp) and will not assume the existence of Customer B's generator on the circuit. Interconnection costs will then be estimated based on no other generator present on the circuit. Customer B's estimate will also be performed in the same manner assuming no other generator being present on the circuit. If the addition of one generator to the circuit does not cause the need for electric system upgrades, but two generators do cause the need for system upgrades, then one of these customers will have to pay this upgrade cost. If Customer B is the "First-to-Market" in that it chooses to sign an interconnection agreement first, then its cost estimate is valid even though it was not the first to submit an application. If Customer A subsequently decides to go forward, it will be necessary to reanalyze its project (at its cost) and to revise its cost estimate prior to both parties signing an interconnection agreement.

The draft code does not appear to adequately address the above type of scenario with regard to the "First-to-Market" issue other than brief discussions on time-stamping initial applications in Section XXX.050(b).

The concept of cost estimates with Binding Maximum Value in Section XXX.090(e) and elsewhere is inconsistent with how the interconnection provider determines cost estimates for other customer situations, such as new service facilities, and is inconsistent with how FERC approaches the issue for both large and small generators. Some costs may be estimated but the actual cost may be outside of the provider's control, such as for obtaining right-of-way, addressing impacts on neighboring utilities' electric systems, and impacts on neighboring customer's equipment. It is recommended that the draft Code be changed to provide a non-binding, good-faith estimate to the customer and that the interconnection provider follow up with actual costs.

General Comment #3 – Scopes of Studies

It is recommended that the scopes of the Feasibility/Impact Study and the Facilities Study be modified to coincide with the approach utilized by FERC in its proposed rule for small generators. In this rule, it is clearly indicated that the FERC Feasibility Study (Section 4.6 of FERC Rule) identifies problems, but does not propose solutions for such areas as short circuit issues, thermal overloads and voltage limit violations, system protection, and facilities required to interconnect. The FERC Impact Study (Section 4.71) then addresses short circuit solutions, stability analysis, power flows, voltage drop and flicker, protection and set points, coordination studies, and grounding reviews. Finally, the FERC Facilities Study (Section 4.8.2) then focuses on cost estimates and schedule.

Definitions

General Comment #4

Definitions of terms are provided but such terms are not routinely capitalized throughout the document when they are used, as is standard practice.

"Agreement" – Add the phrase "…, which falls under ICC jurisdiction," after the word "agreement" in the first line of this definition. This change will clarify that the agreements being discussed are only those under ICC jurisdiction.

"Delivery Service" – This proposed definition deals with the delivery of customer-generated power by the interconnection provider to a buyer or a delivery point. In most (if not all) cases for small resources connected to electric distribution systems, such delivery service would be under FERC jurisdiction and not relevant to this draft code. Also, the definition of this term is worded differently than the definition provided in the Public Utilities Act, 220 ILCS 5116-102.

"Distributed Generation Equipment" – This proposed definition contained no size limit. It is recommended that the maximum size limit of 10 MW, as specified in IEEE 1547, be added to the definition.

Proposed New Term and Definition for "Electric Distribution System" – This new term would be defined as: "Any part of the electric system that is not transmission as defined by the FERC Seven Factor Test." It is believed that this is an important term used throughout the draft code and that it needs to be defined.

Proposed New Term and Definition for "Good Utility Practice" – This new term would be defined in the same manner as FERC defines it. "Good Utility Practice shall mean any of the practices, methods, and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision as made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region." This term, as proposed, is utilized in several subsequent comments.

"IEEE" – Delete the extra word "responsible" in the second line of the definition.

"Interconnection Customer" – This definition seems to be rather broad and should be limited to ICC jurisdictional interconnections for this document.

Proposed New Term and Definition for "Interconnection Facilities" – This new term would be defined as*:* "The individual or multiple devices used in an interconnection system that interconnect a small resource to the point of common coupling." This definition helps to define the scope of the facilities.

"Islanding" – It appears that the term "customer's" in the third line should be changed to "provider's."

Proposed New Term and Definition for "Parallel Operation" – This new term would be defined as "Operation of customer's generation facility in parallel with Interconnection Provider's electric system for more than six cycles, as specified by IEEE 1547." This definition helps to define when an interconnection agreement is applicable.

"Point of Common Coupling (PCC)" – Delete the last sentence of the proposed definition which indicates that the PCC is typically on the customer's side

of the meter. The meter location can vary and its location can be dependent on physical attributes at the site which can result in it not being the PCC. If the meter is not at the PCC, then it is typically compensated for its location to read as if it was located at the PCC. Also, it is noted that the Interconnection Agreement in Appendix A uses the terms "point of Interconnection" and "point of delivery." The Administrative Code and the Interconnection Agreement should be consistent on use of terms.

"Radial Feeder" – Suggested revision of this definition is as follows: "An electric line that branches out from a substation, line tap, or other source on the interconnection provider's system and is normally not connected to another substation, line tap, or other source on the interconnection provider's system." This definition replaces the phrase "distribution line" with "electric line" since radial feeds could be 138 kV or 345 kV lines that connect to a customer. Also, the term "substation" is replaced by more general terms since the source could be from a substation, a line tap, or other source.

"Short Circuit Contribution" – Add the phrase "at the PCC" at the end of the first line after the word "contribution" and in the second line after the word "contribution." This addition provides clarity. Also, change the term "Company" at the end of the second line to "Interconnection Provider" for consistency with the rest of the draft Code.

"Small Resource" – It is recommended that the maximum size limit of 10 MW, consistent with IEEE 1547, be added to the definition. Also, it is noted that this term appears to be redundant with the defined term "Distributed Generation Equipment."

"Violation" – Add to the end of this definition the phrase "…under applicable regulations, industry standards, and Good Utility Practices." This addition provides clarity as to the basis of the violations.

Section XXX.020 – Purpose – Add at the end of the paragraph the following sentence: "This Code Part XXX does not pertain to distributed generation facilities which are operated in a non-parallel manner." This sentence clarifies that this Code Part does not apply to generation facilities which serve isolated loads or only under emergency conditions for loads isolated from the electric system.

Section XXX.030(a) – Applicability – Delete the phrase "or high voltage transmission system" from the last line of the paragraph. The new definition of the "electric distribution system" was crafted to avoid confusion as to which lines and interconnections are governed by this Code.

Section XXX.040(a)(1) – The word "customer" in the second line should be "provider."

Section XXX.040(a)(2) – Insert the phrase "..., Good Utility Practice," after the word "standards" in the third line. This addition helps to capture other requirements specific to a utility, region, or reliability group which may not be formalized in a regulation or industry standard.

Section XXX.050(a) – Modify the second sentence to read as follows: "System information provided to interconnection customers should include non-confidential information, relevant studies reflecting current system conditions, and other material useful to an understanding of an interconnection at a particular point on the system." The sentence, as currently written, is too specific and may create conflicts or confusion. For example, some system studies cannot be shared because they were performed for other customers while other existing studies that can be shared may be out of date.

Section XXX.050(b) – Insert the phrase "designated office/employee" in the second line after the word "provider ['s]." This clarifies where the application must be submitted and avoids penalizing the utility when the application is sent to a local company office which may not understand the urgency or protocol for handling the document.

Section XXX.050(b) – In the fourth sentence which begins with the words "The interconnection provider shall provide…," replace the word "provide" with the word "issue." If the provider utilizes standard mail service to transmit the notification, the provider cannot readily assure <u>receipt</u> of the notification in three business days but he can assure <u>issuance</u> of the notification in three business days.

Section XXX.050(b) – In the fifth sentence which begins with the words "The interconnection provider will notify…," replace the word "notify" with the phrase "issue a notification to…." If the provider utilizes standard mail service to transmit the notification, the provider cannot readily assure <u>receipt</u> of the notification in ten business days but he can assure <u>issuance</u> of the notification in ten business days.

Section XXX.050(c) – In the second sentence which begins with the words "The interconnection customer will have ten business days…," it is indicated that the customer may request an extension of time to provide additional information. Insert the phrase "…,not to exceed 30 days," after the word "time" in this sentence so as to indicate a clear and reasonable expectation of what the maximum data submittal extension period beyond the normal ten days should be.

Section XXX.050(d) – Insert at the end of the second sentence the phrase "…, but will reset the date for receipt of a complete application." The remainder of the paragraph can then be deleted. This change clearly indicates that the provider's time-limited review does not start until a complete and non-changing application is in hand.

Section XXX.050(e) – In the last sentence insert the word "confidential" between the words "any" and "information." It may be necessary for a subsidiary to share certain information, such as for budgeting or staffing, with its parent and, thus, non-confidential information may need to be shared. Also, at the end of the last sentence after the word "affiliates," insert the words "or any third party." This addition strengthens the confidentiality requirement.

Section XXX.050(f) – In the second sentence which begins with "Applications will be processed…," delete the last word "received" and add the phrase "determined to be complete." This approach will assure that complete applications are not delayed while earlier time-stamped applications that are incomplete are still awaiting submittal of data.

Section XXX.060 – Initial Review – In the first line of the first sentence insert the phrase "…, subject to the provisions of Section XXX.150," between the words "days" and "after." Section XXX.150 indicates that the interconnection provider will make all reasonable efforts to comply with the allotted time frame but may not always succeed in meeting this time limit. This phrase can be inserted next to other time-specified activities in the draft Code where significant work/analysis must be performed.

In the sixth line of the first sentence insert the word "results" between the words "analysis" and "and." Some analysis may contain confidential information, thus, it is proposed that key findings and results be supplied.

Section XXX.070(f) – In the last line of this section delete the word "transmission," since not all voltage levels involved are transmission level. Also, insert the words, "…the voltage at…" in the last line between the words "from" and "the" to clarify the point of reference for the voltage for the "…3 or 4 levels…" mentioned earlier in the sentence.

Section XXX.070(k) – Primary Screening Criteria – Modify the sentence to read as follows: "The proposed small resource's point of common coupling will be on the electric distribution system." This revision deletes reference to the PCC <u>not</u> being on a transmission line and instead requires the PCC to be on the defined term "electric distribution system" which could include a 138 kV or 345 kV line if such line fails the FERC Seven Factor Test as a transmission line.

Section XXX.080(b) – Secondary Screening Criteria – The term "spot network" used in this section should be defined in Section XXX.010 – Definitions.

Section XXX.080(c) – In the first sentence after the word "any," insert the word "secondary" in order to differentiate the type of "networks" which are being discussed. The term "secondary networks," as used elsewhere in this section, should be defined in Section XXX.*010* – Definitions.

Section XXX.080(d) – In the last line of this section insert the word "secondary" between the words "any" and "network" to clearly differentiate the type of "networks" which are being discussed.

Section XXX.080(f) – In the fourth line of this section replace the word "on" with the words "connected to" to provide clarity. This section ends with a phrase after the semicolon. For clarity, replace the semicolon with a period and reword the phrase as a sentence as follows: "The interconnection should not be proposed for a circuit that already exceeds the 90% short circuit interrupting capability limit."

Section XXX.080(g) - Modify the sentence to read as follows: "The proposed small resource's point of common coupling will be on the electric distribution system." This revision deletes reference to the PCC <u>not</u> being on a transmission line and instead requires the PCC to be on the defined term "electric distribution system" which could include a 138 kV or 345 kV line if such line fails the FERC Seven Factor Test as a transmission line.

New Section XXX.085 – Certification of Compliance with IEEE 1547 and All Other Codes – It is proposed to add a new section to address the need for the interconnection customer to provide certification that its small resource meets the applicable standards and codes. Wording for this proposed section is as follows:

> "The interconnection customer shall submit to the interconnection provider the necessary plans and/or certified documents that show the proposed small resource will meet all of the interconnection requirements specified in IEEE 1547, all other applicable codes and standards, and Good Utility Practices. This should include, at a minimum, the following:
>
> a) Plans for installing breaker, relays, switches, etc. to meet the interconnection protection requirements for safe parallel operation;
>
> b) Certification of compliance with power quality (voltage fluctuations, harmonics, etc.) per applicable codes and standards;

c) Plans for performing interconnection installation and commissioning tests per IEEE 1547 Section 5; and

d) Plans for periodic interconnection tests.

The interconnection provider will perform a review to determine if other equipment (metering, disconnect switch, etc.), along with any associated costs, is needed to make the interconnection.

Within 25 business days of the receipt of the above documents, the interconnection provider shall review the material and inform the interconnection customer of any deficiencies, or acceptance of the customer's compliance with the codes, and the need for any additional interconnection equipment."

This step will provide the evidence that the requirements in XXX.040(a)(2) are being met and also identifies when the interconnection provider performs such review.

Section XXX.090(a) – Insert the following phrase in the second line after the word "criteria": "…and the certification of compliance outlined in Section XXX.085,…." This addition will clarify that satisfying standards and codes will also be part of the initial review process. Also, in the third line, change the word "provide" to "issue" to clarify that the interconnection provider will release his review in the allotted five days, although it may not arrive in the possession of the customer due to delays in mail delivery.

Section XXX.090(b) – Insert the following phrase in the second line after the word "criteria": "…and the certification of compliance outlined in Section XXX.085, but…." This addition will clarify that satisfying standards and codes will also be part of the initial review process. Also, in the sixth line, change the word "provide" to "issue" to clarify that the interconnection provider will release his review in the allotted five days, although it may not arrive in the possession of the customer due to delays in mail delivery. Suggest deletion of the "issue/provide" comment.

Section XXX.090(c) – Insert the following phrase in the fifth line after the word "standards": "…but complies with the certification of compliance outlined in Section XXX.085,…." This addition will clarify that satisfying standards and codes will also be part of the initial review process.

Section XXX.090(d) – In the first paragraph, eighth line, first sentence, replace the words "modifications necessary" with the words "issues to be addressed." The interconnection provider should not be telling the customer the modifications he must perform. When the provider "designs"

modifications for the customer, he is then creating a liability for himself if the modification later creates a problem. Rather, the provider should identify the issues which need to be addressed and let the customer design the modification. Also, in the second sentence, insert the word "results" after the word "analyses." Some analysis may contain confidential information, thus, it is proposed that key findings and results be supplied.

In the second paragraph, delete the third, fourth and fifth lines, starting with the word "confirmation" and replace with the following: "…submission by the interconnection customer of written modification plans to address provider-identified issues on the proposed small resource. These modifications are to be completed at the interconnection customer's cost." Since the previous paragraph has been revised so that the interconnection provider is not "designing" modifications for the customer but only identifying issues for which the customer must design modifications, then the provider needs to review the modification plans for acceptability prior to issuance of the interconnection agreement.

Section XXX.090(e) – Insert the following phrase in the first sentence, second line after the word "criteria": "…and the certification of compliance outlined in Section XXX.085,…." This addition will clarify that satisfying standards and codes will also be part of the initial review process. Also, in the first sentence, it is specified that the interconnection provider must recommend in writing within ten business days, any system or facility modifications necessary. The determination of needed electric distribution system modifications will require a detailed system review of what must be added or upgraded and an accurate cost estimate for materials and installation labor. The interconnection provider should be allocated 25 business days to complete this potentially complex review. This paragraph also calls for cost estimates for modifications to have a binding maximum value. The concept of a maximum binding value is contrary to how utility customers are billed for other work and also how FERC addresses the issue for large and small generators under its jurisdiction. It is recommended that the customer pay actual costs and that the draft Code be changed to state such. Some costs may be estimated but some of the actual costs are outside of the provider's control, such as costs for obtaining right-of-way, addressing impacts on neighboring utilities' electric systems, and impacts on neighboring customers' equipment. It should also be clarified at this point that cost estimates are subject to change until the interconnection agreement is signed by both parties. This will help to address the "First-to-Market" issue discussed in General Comment #2.

Section XXX.100(a) – In the first sentence after the word "days" insert the phrase "…at the interconnection provider's office." Holding the meeting at the provider's office allows the provider to get his team for small resource

implementation together to address the customer's questions. It also maximizes the availability of this team to address other small resource customers' needs rather than spending significant time traveling around the state.

Also, in the second sentence after the word "meeting" occurs the first time, insert the phrase "…,or make available via teleconferencing,…."This will allow the customer or provider to tie-in a particular person via a conference call if that person is unavailable to travel on the day of the meeting. Otherwise, meeting scheduling could be delayed until all participants can be present.

Section XXX.100(b) – In the first sentence, delete the remainder of the sentence starting with the word "existing" and insert the following: "…non-confidential information, relevant studies reflecting current system conditions, and other material useful to an understanding of the proposed interconnection." There may be existing studies performed for other customers which contain confidential information. Other "existing" studies may be out of date. Also, this section contains a reference to "binding maximum value." The comment provided for Section XXX.090(e) on binding maximum value also applies here.

Section XXX.110(a) – The first sentence calls for a deposit of 50% of the Feasibility/Impact Study cost within 15 days from receipt of the agreement. It is recommended that the deposit be 100% of the estimate and be submitted with the agreement. This approach is consistent with how utility customers are billed for other services and is consistent with how FERC approaches such payments for large and small generators. Also, this section contains a reference to "binding maximum value." The comment provided for Section XXX.090(e) on binding maximum value applies.

Section XXX.110(b)(5) – Delete the second and third sentences which indicate that the interconnection provider may suggest modifications and their associated costs. As indicated in the comment for Section XXX.090(d), developing/suggesting modifications opens the interconnection provider to liability. It is suggested that the second sentence read as follows: "The interconnection provider will describe all functional deficiencies identified that may help to address potential violations." Also, this section contains a reference to "binding maximum value." The comment provided for Section XXX.090(e) on binding maximum value applies.

Section XXX.110(c)(3) – Change the words "interconnection request" to "signed and valid interconnection agreement." Basing a study on small resources that are in a queue but do not have a valid signed interconnection agreement could easily result in the need for reanalysis as proposed projects (without a signed and valid interconnection agreement and

system modification deposits) are cancelled. The approach that was proposed in the draft Code could result in the customer paying for system upgrades that are not needed because customers ahead in the "request queue" may cancel their projects, thus, eliminating the need for the upgrades. This approach of considering only projects with signed interconnection agreements in studies for other projects is consistent with the FERC approach for small generators as indicated in Section 4.7 of the FERC proposed small generator interconnection rule.

Section XXX.110(d) – This paragraph requires the provider to perform a study "…regardless of its initial indicated purpose…." This seems to imply that the interconnection provider assume the most complex case (exporting all power generated into the grid) in the study and then require the customer to pay for upgrades to the electric distribution system for this scenario even though the customer may have no future expectation of implementing this scenario. Such an approach seems to penalize the customer. The alternate interpretation of this paragraph is that the provider performs a series of studies for the customer addressing each possible operating scenario. This approach also penalizes the customer in that it will significantly increase the study cost and inefficiently use interconnection provider engineering resources. It is recommended that this paragraph be modified to indicate that the customer be required to specify the operating modes/studies that it wants performed by the interconnection provider. It should also be indicated that the customer can request other studies at a future date, but such additional studies shall be treated as a new interconnection request in all respects.

Section XXX.110(e) – In the first line of this section insert the words "at the time of the original interconnection request" after the word "customer." Also, at the end of the paragraph add the following new sentence: "If the interconnection customer requests a Feasibility/Impact Study of additional potential points of interconnection after the studies of those in the initial interconnection request have been completed, then such additional requests shall be treated as a new interconnection request in all respects." These inserts clarify that if the customer comes back to the interconnection provider for further studies on other interconnection points after the first point(s) of interconnection has been evaluated, then the additional request falls to the end of the provider's study queue and is treated as a new application.

Section XXX.110(f)(1) – This paragraph requires the interconnection provider to send the customer a Facility Study agreement "immediately" if the Feasibility/Impact Study shows no potential violations. It is recommended that the word "immediately" be replaced with the phrase "…, within three business days," so as to put a more reasonable time period into the process. Also, this section contains a reference to "binding maximum

value." The comment provided for Section XXX.090(e) on binding maximum value applies.

Section XXX.110(f)(3) – This section goes into the case where impact occurs on the transmission system but the interconnection provider does not operate the transmission system. Another scenario may exist where the small resource is located on the edge of the interconnection provider's distribution system but impact occurs on another distribution system (municipal, cooperative, investor-owned). The process for handling this scenario is not addressed in the draft code.

With regard to the scenario addressed in the draft code where the interconnection provider is not the transmission operator, the draft code appears to be very prescriptive as to what the interconnection provider must do in terms of time frames, cost estimates, deposits, and serving as an intermediary. These prescriptive actions may be contrary to the applicable RTO or ISO rules governing such matters. It is recommended this section be simplified to rely on compliance with the RTO or ISO rules/process (as appropriate) and minimizing the role of the interconnection provider as an intermediary.

Section XXX.110(f)(4) – In the first sentence change the word "may" to "shall" since applying for project coordination is the customer's responsibility. Also, in the first sentence, change the term "Independent Transmission Interconnection Customer" to "Independent Transmission Interconnection Provider." This change appears to correct a typographical error.

Section XXX.120 – Facilities Study – In the second sentence of the first paragraph, it is being proposed that the interconnection provider may "suggest optional modifications." As indicated in the comment on Section XXX.110(b), the interconnection provider providing "optional modifications" opens the provider to liability if the modification should create a problem. It is recommended that the word "modifications" (in two places) be replaced with the word "approaches."

In the second paragraph, the concept of "binding maximum value" is utilized. Comments on this approach are provided in the remarks on Section XXX.090(e). Also, a deposit of 50% of the estimated facilities study cost is specified. It is recommended the deposit be changed to 100% of the estimate as discussed in the comments on Section XXX.110(a) of the draft Code.

It appears that the last sentence of the second paragraph would be more appropriate if it were relocated to the end of the first paragraph of this section and reworded as follows: "If the Feasibility/Impact Study determines that no high voltage transmission system or electric power

distribution system interconnection facilities are required, the Facilities Study will not be required and the project can proceed directly to the execution of an interconnection agreement."

Section XXX.120(a) – Insert the following phrase in the first sentence, third line, between the words "modifications" and "will": "…,per the requirements contained in Section XXX.085,…."This insert clarifies the source of the requirements to be used for the facilities study.

Section XXX.120(c) – The term "binding maximum cost" is utilized. As indicated in the comment on Section XXX.090(e), it is believed that the Code should be changed so that the customer should pay the actual cost. It is also believed that the Code should be changed so that the estimated cost should be paid at the time of interconnection signing, consistent with the FERC approach for large and small generators. This allows for the engineering, material procurement, and installation to proceed. Also, in the second sentence between the words "subsequent" and "interconnection," insert the words "small resource" for clarity and to distinguish from non-generation interconnections.

Section XXX.140(c) – Add the phrase "employee or office" to the end of the sentence. This addition clarifies that rather than a single person being the contact, the interconnection provider may use multiple people via the office concept in order to provide better service.

Section XXX.160 – Add the following phrase to the end of the sentence: "…and interconnection provider's electric tariffs." This addition further clarifies the rules under which metering is to be installed.

Section XXX.170(b) – Modify the section to read as follows: "Interconnection Provider shall be responsible for the physical interconnection, at interconnection customer's expense, of interconnection customer's installed distributed generation equipment to Interconnection Provider's system. Interconnection customer's distributed generation equipment shall be installed in compliance with, and all commissioning tests thereof shall be performed pursuant to, applicable codes and standards. Interconnection customer shall demonstrate installation in compliance with applicable codes and standards through the certification of a licensed electrician or engineer (as appropriate for the size of the small resource) that the installation of interconnection customer's installed distributed generation equipment is in compliance with the applicable codes and standards and attaching any equipment vendor documentation supporting such certification. Not withstanding the foregoing, Interconnection Provider shall have the right, but shall have no obligation to review the settings of the interconnection customer's system protection facilities; provided, however, Interconnection Provider's exercise or non-exercise of

such right shall not be construed as an endorsement or confirmation of any element or condition of such system protection facilities or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of the same. The Interconnection Provider shall be given not less than ten business days' prior written notice, or as otherwise mutually agreed to by the parties, of commissioning tests and may be present to witness the commissioning tests. Written results of such commissioning tests shall be provided to Interconnection Provider within three business days of interconnection customer receiving same. Interconnection Provider's failure to witness such tests following proper notice from interconnection customer shall not be the sole basis for Interconnection Provider challenging same."

The above wording helps to clarify responsibility of both parties and the approach to be followed.

Agreement for Interconnection

General Comment #5

This interconnection agreement fails to include the following topics (list not inclusive):

Force Majeure
Assignments
Default
Environmental Releases
Insurance
Remedies
Disputes
Milestones

Such topics are common to interconnection agreements such as the one provided by FERC in its proposed regulation on the Standardization of Small Generator Interconnection Agreements and Procedures.

The size for small resources covered by this interconnection agreement appears to range from a few kW to 10 MW. The interconnection agreement proposed in Appendix A is more appropriate in content for a small generator that is less than *25* kW in capacity and is too brief for a larger unit. Perhaps two agreements, one for units under 25 kW and one for units over 25 kW up to 10 MW should be developed, as was done for the applications in Appendices B and C. The interconnection agreement for the larger units could then be modeled from the FERC agreement.

Section 4.a. – In the second line, the words “Company-approved” should be replaced with the words “Commission-approved.” Typographical error.

Section 4.e. – After the second sentence, insert the following sentences: “Customer shall retain a certified installer/inspector (licensed electrician for units under *25* kW in capacity and registered engineer for larger units) in order to assure the installation meets applicable codes, standards, and good utility practices. This installation review shall be documented and presented to the company.” This requirement provides assurance that the generation facility has been properly constructed and interconnected.

The third sentence is confusing in that it refers to the “electric service” provided by the customer. Customers are not normally thought of as supplying electric service. It is recommended that different terminology be used.

Section 4.f. – Insert the word “initial” between the words “the” and “connections.” This clarifies that this requirement only applies to the initial interconnection and not each time the customer brings a generator on-line for parallel operation.

Section 5 – Add a sentence to the end of this paragraph indicating the company will have the right to review routine maintenance and testing records for interconnection equipment in order to assure that such equipment can perform its protective function as designed.

Section 6 – First Paragraph – Providing the interconnection provider with 30 days notice that a source is being disconnected does little to help the utility in providing service to its other customers. As stated in the purpose section of the draft code (XXX.020), some of the benefits of distributed generation are to improve reliability of electric service and provide electric system benefits during times of constraints. If customers can remove units from service at their convenience with only 30 days notice, the utility must continue to make long-term provisions in the electric system design to serve loads assuming the customer generation is not present and must enter into electric supply contracts that assure back-up power can be obtained to cover the removal of customer generation from service (for other than routine maintenance purposes). In order for the full value of distributed generation to be realized, customers need to provide significant advance notice (at least 12 months) when long-term operation or disconnection of the generation is planned.

Section 6, Third Paragraph – Insert the words “…use reasonable efforts to…” between the words “shall” and “provide.” Sometimes the exact timing of a planned system outage or its duration may be modified based on the field conditions present or emerging events.

Section 6, Fourth Paragraph – In the first sentence, insert the words "or could" between the words "will" and "endanger" so as to include situations that have the potential to endanger persons or property.

Section 6, Fourth Paragraph – Add the following phrase to the end of the first sentence: "…or adversely impact service to other customers." This addition clarifies another important consideration as to when service can be suspended.

Section 7, In Item (c) it is recommended that the phrase, "...there is reasonable opportunity to cure the default…" be reworded to include a specific time frame, such as 45 or 60 days, to remove the vagueness from the cure period.

Section 8 – In the second sentence, delete the word "valid" All laws should be presumed to be valid until overturned by a court of competent jurisdiction.

Section 10 – In the third sentence insert the word *"*interconnection*"* between the words *"*prior*"* and *"*agreement*"* so as to clarify that this new interconnection agreement is only replacing a prior interconnection agreement and not any other agreement *(*equipment leases*,* etc*.)* that may exist.

Section 14 – Add the following sentence to the end of this section: "Any waivers of this Agreement shall, if requested, be provided in writing." This addition is consistent with the FERC small generation proposed rule.

Facility Schedule for Interconnection Agreement

Facility Schedule No., Item 11 – This item asks if supplemental terms and conditions are attached. It is recommended that, as a standard process, the customer's complete application and the company's analysis results report (initial review or facilities study) be attached so as to capture in the interconnection agreement the details of the customer's generating facility and the terms/conditions from the company's analysis.

Appendix B – Short Form Application

- In the title, change the term "kV" to "kVA" to reflect that size/capacity of the generator is the criteria rather than its voltage.

- Between the third and fourth line, add a new line as follows: "Interconnection Provider's Telephone Number." This piece of information is missing on the application form and will be valuable to the customer.

- The first line under “Applicant Information” should have the letter “A” in front of “Legal Name” since the letter “B” occurs below in front of “Consulting Engineer or Contractor.” In general, the use of letters and numbers in front of all lines of requested data makes it easier to discuss the application with the customer since the data in question can then be quickly identified.

- After the “Applicant Address,” it is suggested that a line be added requesting the business’ DUN’s number or FEIN Number. These numbers are unique and help the interconnection provider track a business customer who might change his name or be sold.

- After the line which reads “Estimated In-service Date,” add the words “…of Generator” for clarification.

- In the line on the second page that starts with the word “Rating,” add at the end of the term “kVA” the words “at _____ volts.” It is important to know the voltage at which the generator is rated.

- After the line on the second page that starts with the word “Rating,” insert a new line which would read as follows: “Short Circuit Current _____ Amps at _____ volts.” This information is needed for interconnection evaluation and/or future circuit analysis.

- In the line on the second page that starts with “DG System Type Tested…” replace the words “…product literature” with the words “copy of certification.” Product literature will not contain the needed information while the equipment certification of compliance will provide necessary information regarding design compliance with codes and standards.

- In the line on the second page that begins with “( ) Yes ( ) No:,” replace the words “…product literature” with the words “…copy of certification.” Product literature will not contain the needed information while the equipment certification of compliance will provide necessary information regarding testing compliance with codes and standards.

- Provide a line item to require applicant to submit site control documentation as specified in Section XXX.050(g) of the draft code.

Appendix C – Standardized Application Form

Preamble and Instructions – Add a line that reads as follows: “Interconnection Provider’s Telephone Number.” This piece of information is missing on the application form and will be valuable to the customer.

Section 1.A. - After the "Applicant Address," it is suggested that a line be added requesting the business' DUN's number or FEIN Number. These numbers are unique and help the interconnection provider track a business customer who might change his name or be sold.

Section 1.C. – After the line which reads "To supply power to others? Yes_____ No_____" add the line "To sell power back to the utility? Yes_____ No_____ since this is another, and more likely, option for small generation."

It is also recommended that the following line items be added to this section to clarify the customer's planned use of the generation facility:

"Base Load? Yes_____ No_____
Peak Shaving? Yes_____ No_____
Emergency Back-up Only? Yes_____ No_____"

Section 1.E. – After the word "Interconnection" insert the following to indicate that the customer should provide a map: "(Include a Site Location Map.)"

Section 1.F. – At the end of the line after the word "…date..." add the words "for generation facility" to clarify what the in-service date applies to.

Section 2 – In the line beginning with the words "Energy Source," the term "Hydro" is listed twice.

Section 2 – Add the line item "Generator Nameplate kV___" after the line "Generator Nameplate kVAR___."

Section 2 – In the line item that starts with the words "List components of the Generating Facility that are currently certified by a…," insert after the word "certified" the following words "…for parallel operation with an interconnection provider…" to clarify what the certification is for.

Section 3 – The first item that begins with "[Note: For Wind Generators…," it appears that a specific vendor (GE) is being referred to in the note. It is recommended that specific vendors not be referenced.

Section 4 – Under "Interconnecting Circuit Breaker," the term "Amps" is listed twice.

Section 5 – Provide a line item to require applicant to submit site control documentation as specified in Section XXX.050(g) of the draft code.